

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A An isolated polynucleotide encoding mammalian Prickle protein, wherein the polynucleotide comprises a sequence selected from the following nucleic acid sequences of (1) to (4):

(1) a nucleic acid sequence that encodes the amino acid sequence of SEQ ID NO: 1, ~~or a complementary sequence thereof;~~

(2) ~~the~~ a nucleic acid sequence of as shown in SEQ ID NO: 2, ~~or a complementary sequence thereof;~~

(3) a nucleic acid sequence that ~~encodes an amino acid sequence with one or more amino acid deletions, insertions, substitutions, or additions to the amino acid sequence of~~ SEQ ID NO: 1, or a sequence complementary to said nucleic acid sequence has at least 95% identity with a nucleic acid sequence comprising the nucleic acid sequence as shown in SEQ ID NO:2, and encodes an amino acid sequence that binds PSD-95; and

(4) a nucleic acid sequence that hybridizes with a complementary sequence of the nucleic acid sequence as shown in SEQ ID NO:2 ~~the sequence of (2)~~ under stringent conditions of 2x SSC, 0.1% SDS, 50°C or 1x SSC, 0.1% SDS, 37°C.

2. (Currently amended) A vector comprising the polynucleotide of claim 1 or 10.

3. (Currently amended) A host cell comprising the polynucleotide of claim 1 or 10.

4. (Currently amended) A method for producing a mammalian Prickle protein encoded by the polynucleotide of claim 1, wherein the method comprises the ~~step of~~ translating said polynucleotide steps of culturing the host cell comprising the polynucleotide of

claim 1, and recovering an expressed protein from said host cell or the culture supernatant thereof.

5. (Currently amended) A purified fragment of a polypeptide encoded by the a polynucleotide of claim 1, encoding mammalian Prickle protein, wherein the polynucleotide comprises a sequence selected from the following nucleic acid sequences of (1) to (4):

(1) a nucleic acid sequence that encodes the amino acid sequence of SEQ ID NO:1;

(2) a nucleic acid sequence as shown in SEQ ID NO: 2;

(3) a nucleic acid sequence that has at least 95% identity with a nucleic acid sequence comprising the nucleic acid sequence as shown in SEQ ID NO:2, and encodes an amino acid sequence that binds PSD-95; and

(4) a nucleic acid sequence that hybridizes with a complementary sequence of the nucleic acid sequence as shown in SEQ ID NO:2 under stringent conditions of 2x SSC, 0.1% SDS, 50°C or 1x SSC, 0.1% SDS, 37°C,

wherein the fragment comprises at least eight amino acid residues and a PET domain.

6. (Canceled).

7. (Currently amended) A An isolated nucleotide chain that encodes ~~the~~ a polypeptide fragment of ~~claim 5~~ a polypeptide encoded by a polynucleotide encoding mammalian Prickle protein, wherein the polynucleotide comprises a sequence selected from the following nucleic acid sequences of (1) to (4):

(1) a nucleic acid sequence that encodes the amino acid sequence of SEQ ID NO:1;

(2) a nucleic acid sequence as shown in SEQ ID NO: 2;

(3) a nucleic acid sequence that has at least 95% identity with a nucleic acid sequence comprising the nucleic acid sequence as shown in SEQ ID NO:2, and encodes an amino acid sequence that binds PSD-95; and

(4) a nucleic acid sequence that hybridizes with a complementary sequence of the nucleic acid sequence as shown in SEQ ID NO:2 under stringent conditions of 2x SSC, 0.1% SDS, 50°C or 1x SSC, 0.1% SDS, 37°C,

wherein the fragment comprises at least eight amino acid residues and a PET domain.

8. (Previously presented) A host cell comprising the vector of claim 2.
9. (Canceled).
10. (New) An isolated polynucleotide comprising a complementary sequence of the polynucleotide of claim 1.
11. (New) The polynucleotide of claim 1, wherein the polynucleotide comprises a nucleic acid sequence that has at least 99% identity with a nucleotide sequence comprising the nucleotide sequence of SEQ ID NO:2.
12. (New) The polynucleotide of claim 1, wherein the polynucleotide comprises a nucleic acid sequence that encodes a PET domain and a LIM domain.
13. (New) The polynucleotide of claim 12, wherein the PET domain corresponds to position 19-89 and the LIM domains correspond to positions 130-186, 195-246, and 254-310 of the amino acid sequence of SEQ ID NO:1.